IN THE CLAIMS

Please amend Claims 1-4 as follows. Please add new Claims 9-12. Note that Claims 5-8 are not being amended, but are included here such that a full set of all claims is presented.

1. (Amended) In a three-phase hybrid type stepping motor comprising a stator, and a rotor arranged concentrically with the stator and with an air gap therebetween, said stator having an annular stator yoke, six stator poles extending radially and formed at a regular pitch on the inner peripheral surface of the annular stator yoke, and stator windings of three-phase each wound around each stator pole, each of said stator poles having a plurality of small stator teeth at the tip end thereof, said rotor having two splitted rotor elements and a permanent magnet held therebetween and magnetized so as to form N and S poles in the axial direction thereof, and a plurality of small rotor teeth formed at a regular pitch on the outer peripheral surface of each of said rotor elements, said two splitted rotor elements being shifted from each other in angular position by a 1/2 pitch of the small rotor teeth, a permeance distribution of the small stator teeth is a vernier pitch balanced by a six order harmonic wave, and a ratio of the tooth width of the small stator teeth to the pitch of the small rotor teeth is set to .35-.45.

2. (Amended) In a three-phase hybrid type stepping motor comprising a stator, and a rotor arranged concentrically with the stator and with an air gap therebetween, said stator having an annular stator yoke, six stator poles extending radially and formed at a regular pitch on the inner peripheral surface of the annular stator yoke, and stator windings of three-phase each wound around each stator pole, each of said stator poles having a plurality of small stator teeth at the tip end thereof, said rotor having two splitted rotor elements and a permanent magnet held therebetween and magnetized so as to form N and S poles in the axial direction thereof, and a plurality of small rotor teeth formed at a regular pitch on the outer peripheral surface of each of said rotor elements, said two splitted rotor elements being shifted from each other in angular position by a ½ pitch of the small rotor teeth, a permeance distribution of the small stator teeth is

a vernier pitch balanced by a three order harmonic wave, and a ratio of the tooth width of the small stator teeth to the pitch of the small rotor teeth is set to 0.35-0.45.

3. (Amended) The three-phase hybrid type stepping motor as claimed in Claim 1, wherein a number of the small rotor teeth is fifty, a number of the small stator teeth is eight, a tooth pitch is 7.05, and a tooth width ratio of the small rotor teeth with the small stator teeth is set to 0.35-0.45.

4. (Amended) The three-phase hybrid type stepping motor as claimed in Claim 2, wherein a number of the small rotor teeth is fifty, a number of the small stator teeth is eight, a tooth pitch is 7.05, and a tooth width ratio of the small rotor teeth with the small stator teeth is set to 0.35-0.45.

5. The three-phase hybrid type stepping motor as claimed in Claim 1, wherein the three-phase windings of the stator are connected in the form of delta.

6. The three-phase hybrid type stepping motor as claimed in Claim 2, wherein the three-phase windings of the stator are connected in the form of delta.

7. The three-phase hybrid type stepping motor as claimed in Claim 3, wherein the three-phase windings of the stator are connected in the form of delta.

8. The three-phase hybrid type stepping motor as claimed in Claim 4, wherein the three-phase windings of the stator are connected in the form of delta.

9. (New) In a three-phase hybrid type stepping motor comprising a stator, and a rotor arranged concentrically with the stator and with an air gap therebetween, said stator having an annular stator yoke, six stator poles extending radially and formed at a regular pitch on the inner peripheral surface of the annular stator yoke, and stator windings of three-phase each

wound around each stator pole, each of said stator poles having a plurality of small stator teeth at the tip end thereof, said rotor having two splitted rotor elements and a permanent magnet held therebetween and magnetized so as to form N and S poles in the axial direction thereof, and a plurality of small rotor teeth formed at a regular pitch on the outer peripheral surface of each of said rotor elements, said two splitted rotor elements being shifted from each other in angular position by a 1/2 pitch of the small rotor teeth, a permeance distribution of the small stator teeth is a vernier pitch balanced by a six order harmonic wave.

10. (New) In a three-phase hybrid type stepping motor comprising a stator, and a rotor arranged concentrically with the stator and with an air gap therebetween, said stator having an annular stator yoke, six stator poles extending radially and formed at a regular pitch on the inner peripheral surface of the annular stator yoke, and stator windings of three-phase each wound around each stator pole, each of said stator poles having a plurality of small stator teeth at the tip end thereof, said rotor having two splitted rotor elements and a permanent magnet held therebetween and magnetized so as to form N and S poles in the axial direction thereof, and a plurality of small rotor teeth formed at a regular pitch on the outer peripheral surface of each of said rotor elements, said two splitted rotor elements being shifted from each other in angular position by a 1/2 pitch of the small rotor teeth, a permeance distribution of the small stator teeth is a vernier pitch balanced by a three order harmonic wave.

11. (New) The three-phase hybrid type stepping motor as claimed in Claim 9, wherein the three-phase windings of the stator are connected in the form of delta.

12. (New) The three-phase hybrid type stepping motor as claimed in Claim 10, wherein the three-phase windings of the stator are connected in the form of delta.